

Weather the Storm

As Soldiers, we have to be prepared for any threat we might encounter in the field. With the spring and summer months just around the corner, we can soon expect to see a variety of weather-related hazards in our training and operational environments. One of the most common weather events encountered in the field is thunderstorms, which can include hazards such as lightning, tornadoes and flash floods. Let's take a quick look at each of these hazards individually.

Lightning

Since fiscal 2002, at least 21 Soldiers have been injured by lightning strikes, including one Soldier who died from his injuries. If you're caught outside in a thunderstorm with lightning, seek shelter in a sturdy structure or hardtop vehicle. If you find yourself in a metallic-type vehicle, sit with your hands in your lap.

If possible, shut off electronic communications equipment when lightning is in the area and don't use it unless you have to. If you're inside a building equipped with a telephone, don't use it either unless absolutely necessary. Avoid large pieces of metallic equipment, and make risk decisions concerning vehicles loaded with various types of explosives or ammunition. Each type of explosive and ammunition has a different explosive radius for fragmentation and damage. Keep this in mind when making a call on how far to clear away.

When caught in the open with no place to go, ensure you're not close to tall trees or structures that are the highest points in the area. In wooded areas, seek shelter under a thick growth of small trees. Avoid tall objects, isolated trees, bodies of water, sheds and fences. If you're part of a group, spread out and squat down in an attempt to keep as low a profile as possible while keeping both feet planted firmly on the ground; never sit or lie on the ground. The tactical situation dictates other types of mitigation. For instance, radio operators should take down long whip antennas to help create a low profile.

Fighting positions create a unique point of interest. During lightning storms, make sure you're not leaning or resting your body on the inside of the hole. Center yourself and remain alert until the storm passes. A properly constructed fighting position will provide you with overhead cover from hail and high winds and you'll have the lowest profile possible.

Keep in mind most lightning strikes occur after a thunderstorm has passed. Wait about 30 minutes after the storm passes to resume activities. A general rule of thumb in estimating the hazard area for lightning strikes is flash-to-bang time. If you see lightning, begin counting seconds; if you hear thunder within 30 seconds, you're in a hazard area. Get into the "lightning safety position" by squatting down near the ground with your heels touching and your hands over your ears.

Tornadoes

Tornadoes are violent atmospheric storms with winds ranging from 200 to 300 mph in the most severe cases. If you or your unit is caught in the field when a tornado hits, follow these guidelines:

- Seek shelter immediately.
- Avoid trailers or vehicles.
- Never attempt to outrun a tornado in a vehicle; instead, abandon it immediately.
- Seek shelter in a substantial structure and go to the basement or an interior room.



If no shelter is available and you're caught in a convoy, dismount your vehicle and lie flat in the nearest ditch or depression. Be sure to secure your Kevlar helmet and other protective items to prevent injury from flying debris. In a defensive position or base camp, a properly constructed fighting position will place you below the ground with overhead cover if suitable structures aren't available.

Flash floods

Flash floods are another hazard associated with storms, and you don't even have to be in the area receiving the rain for this particular hazard to strike. When selecting operational sites, stay clear of low-lying areas, dry riverbeds, flood plains and canyons. If you're caught outside in a flash flood, move to higher ground immediately. Avoid rivers, streams and low spots. Don't try to walk through flowing water higher than ankle deep and never attempt to drive through flooded areas. Underwater hazards aren't visible, and water more than 1 foot deep can easily displace 1,500 pounds. Just 2 feet of water will move or carry most automobiles!

What else can you do?

Whether you're in the field or in garrison, the best method for maintaining environmental situational awareness is to monitor weather reports. This usually is accomplished in the field via the chain of command and tactical operations centers receiving routine weather data as part of operations. However, if the National Weather Service has deemed weather severe enough to put out a watch or warning, your chain of command usually will provide more guidance on unit actions. If you don't have access to immediate weather data, you can rely on your own judgment and still take appropriate measures to prevent or limit the risk to you and your Soldiers.

These are just a few general tips. Depending on your particular circumstances, you might want to conduct further research into what you can do as a leader when faced with changing weather that might affect mission outcome.

---FYI

Before the next storm hits, make sure your Soldiers are ready for the mission and use the Army Readiness Assessment Program. It's a Web-based initiative that provides battalion-level commanders with data on their formation's readiness posture. Check it out today at <https://unitready.army.mil/>.

---Did You Know

Since fiscal 2002, at least 21 Soldiers have been injured by lightning strikes, including one Soldier who died from his injuries.

- A Soldier was killed by a lightning strike while erecting a tent that had blown over during a storm. The Soldier died at a local medical facility. Four other Soldiers were struck in the same incident, but none suffered serious injuries.
- Three Soldiers training small unit tactics in a wooded area were injured when lightning struck a nearby tree. All three Soldiers were knocked to the ground. The first Soldier to regain consciousness immediately evaluated the other Soldiers and found one wasn't breathing.



The Soldier called for help on his radio and began CPR on the injured Soldier. After approximately two cycles of CPR, the injured Soldier started breathing on his own.

- Three Soldiers were injured when lightning struck near their observation point. All three Soldiers were hospitalized.

- A Soldier was directing vehicle traffic on a parking apron when lightning struck the wet ground about 10 to 30 feet from him. He immediately began convulsing and vomiting. The Soldier was taken to the emergency room, where he was treated and held several hours for observation. The Soldier was not near or holding any metal objects at the time of the strike.

- A Soldier suffered facial injuries after being struck by lightning. The Soldier had been walking across a road during inclement weather when a lightning bolt struck the ground nearby and caused him to fall on his face. The Soldier was unconscious until he arrived at the hospital about 20 minutes later with an injury to his left eye, upper lip, teeth and nose, as well as internal injuries.

- A Soldier was burned after being struck in the head by a lightning bolt. The Soldier was dazed but coherent after the strike and recognized what had happened. The Soldier was checked for injuries by a medic before being transported to the emergency room.

- Eight Soldiers suffered various injuries when they were struck by lightning during annual training. The Soldiers were seeking shelter from a thunderstorm underneath a tarp when lightning struck three trees about 50 feet from their position and traveled at ground level until reaching them. Three of the Soldiers were hospitalized, while five others were treated and released.

- A Soldier was burned after being struck by lightning while walking across an airfield tarmac. The Soldier didn't have a pulse and wasn't breathing when he was found by a Department of the Army Civilian, who revived him.

- A Soldier suffered a head injury after being struck by lightning while talking on the telephone. The Soldier was sitting in a 5-ton vehicle during a severe thunderstorm and was trying to contact his supervisor via land line when an electric current came through the phone.